

## Memorandum

**Date:** 7/27/2016

**To:** Kevin Thomas  
Environmental Program Manager, Fisheries  
North Central Region

**From:** Sarah Mussulman  
Environmental Scientist – High Mountain Lakes  
North Central Region

**Cc:** Region 2 Fish Files

**Subject:** Fisheries monitoring in Placer County – Upper Loch Leven Lake (13500).

On June 8-9, 2016, California Department of Fish and Wildlife (CDFW) conducted fisheries and amphibian monitoring surveys at Upper Loch Leven Lake (CA Lakes ID 13500, Fig. 1) in northeastern Placer County. One overnight gill net was set for total of 19.3 hours and returned no fish. The lake has a long history as a popular backcountry trout fishery and based on the data gathered in 2016, CDFW will consider resuming rainbow trout plants at the lake.



Figure 1: Upper Loch Leven Lake looking southwest on July 7, 2016 (CDFW).

## INTRODUCTION

Upper Loch Leven Lake is one of four associated lakes formerly planted with fingerling trout by CDFW in a small watershed in northern Placer County (Fig. 2). Due to lack of recent fish surveys uncertainty exists about the status of fisheries at High, Upper and Lower Loch Leven Lakes. As directed by the Hatchery Operations EIS/EIR (Jones and Stokes 2010) CDFW is currently evaluating the location and status of stocked and formerly stocked backcountry fisheries. All data gathered as part of this study are incorporated into the High Mountain Lakes database and made available to both federal and state agencies. Data from this memorandum will benefit the Department in future efforts for fish stocking and wild trout management in the North Central Region. Upper Loch Leven Lake is addressed in this memo: the other lakes in the watershed will be addressed in separate memos.

## ENVIRONMENTAL SETTING

Upper Loch Leven Lake has a surface area of 2.3 hectares and a maximum recorded depth of 8.4 meters. Surveyors observed one channelized inlet and an outlet. Terrestrial habitat consists of mixed conifer forest and meadows at an elevation of approximately 2060 meters above mean sea level. The Loch Leven Lakes are easily accessed from a popular trailhead next to Interstate 80 and a well-maintained hiking trail. Incidentally, crews observed multiple groups of visitors at the lake on both days and many campsites are present along the shores of the lake. The watershed drains into the North Fork American River via Little Granite Creek. Tahoe National Forest manages the land in the watershed.

## HISTORY

Due to their location near Interstate 80 Loch Leven Lakes have a documented history of management for trout fishing dating back to the 1930s. General fish surveys conducted in 1938 indicate species present at that time included brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*) and chub (probably *Gila bicolor*) (Curtis, 1938). Between 1930 and 1967 multiple attempts were made to remove chub from the lakes including an unsuccessful attempt to remove fish with dynamite in 1936; however a general fish survey in 1982 captured no chub and chub appear to have been eradicated from the system (Curtis, 1938 and Richard, 1982). At various times throughout the last century the lakes were known for their trout fishing, although as early as 1954 biologists noted that most likely trout are unable to reproduce in the system (Curtis, 1938; Richard, 1954 and 1982).



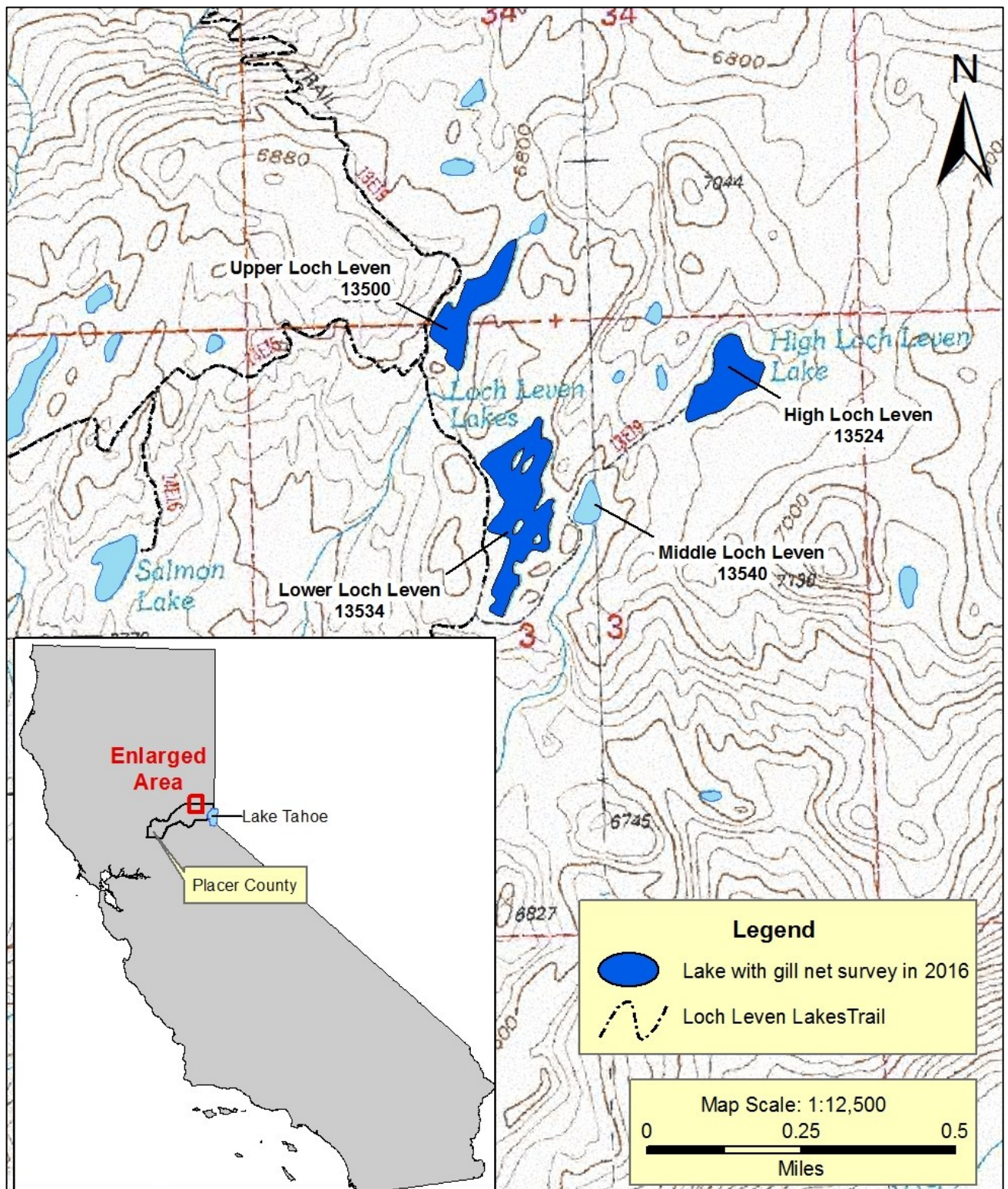


Figure 2: Location of the survey area in northeastern Placer County. Dark blue lakes had gill net surveys in 2016.

## RESULTS

On June 8-9, 2016 a 6-panel, 36 meter x 1.8 meter variable mesh gill net was set overnight for a total of 19.3 hours and returned no fish; due to the gill net survey results as well as observations of thousands of mayflies, CDFW believes the lake is fishless. Most recently, Upper Loch Leven Lake was planted with rainbow trout (*Onchorynchus mykiss*) from 1966 through 2000; there was also a single rainbow trout plant in 1937. Brook trout plants occurred between 1938 and 1966. A single brook trout and six rainbow trout were captured during a 2003 gill net survey in which one net was set for 10.2 hours. Because no fish were captured in 2016 it is unlikely that trout can reproduce in Upper Loch Leven and due to the lake's history as a popular backcountry trout fishery as well as the lack of special status amphibians, CDFW will consider resuming rainbow trout plants at Upper Loch Leven.

Incidentally, CDFW conducted amphibian monitoring surveys at Upper Loch Leven Lake on June 7, 2014 and observed 16 Pacific tree frog (*Psuedacris regilla*) egg masses and one adult, plus 3 garter snakes (*Thamnophis spp*). Water temperature at the surface of the lake was 21° C at the time of survey.

## LITERATURE CITED:

Curtis, B. Loch Leven Lakes fish survey, 1938. CDFW; 8/1938. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128258>

Jones & Stokes. 2010. Hatchery and Stocking Program Environmental Impact Report/Environmental Impact Statement. State clearinghouse #2008082025.

Richard, J. B. Loch Leven Lakes fish survey, 1954. CDFW; 6/1954. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128259>

Richard, J. B. Loch Leven Lakes fish survey, 1982. CDFW; 9/7/1982. Available from: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=128260>